

CLAIMS

What is claimed is:

1. An ablation catheter comprising
a catheter shaft, said catheter shaft comprising
a proximal portion; and
a distal portion, said distal portion being adapted to be inserted into a body cavity having
tissue to be ablated and being disposed remotely from said proximal portion, said distal portion
comprising an outer peripheral wall having an active region, wherein said distal portion has a
cross-sectional configuration along said active region, and wherein said cross-sectional
configuration is adapted to bias said active region against the tissue to be ablated.
2. The ablation catheter of claim 1, wherein said cross-sectional configuration of said
active region includes a flattened outer peripheral wall.
3. The ablation catheter of claim 2, wherein said cross-sectional configuration of said
active region is rectangular.
4. The ablation catheter of claim 2, wherein said cross-sectional configuration of said
active region is elliptical.
5. The ablation catheter of claim 2, wherein said cross-sectional configuration of said
active region is a polygonal configuration.
6. The ablation catheter of claim 5, wherein said polygonal configuration is selected
from the group consisting of a D-shaped configuration, a triangular configuration, and a
rectangular configuration.
7. The ablation catheter of claim 2, wherein said cross-sectional configuration of said
active region is a D-shaped configuration having an aspect ratio of at least 1.5:1.

8. A catheter for diagnosing and treating tissue, the catheter comprising a catheter shaft having a proximal portion and a distal portion, wherein said distal portion comprises

an active region having a longitudinal axis; and
at least one lumen adapted to carry wires, optical fibers, and fluids for a variety of functional purposes,

and wherein said distal portion has a cross-sectional configuration that is asymmetric about at least one plane containing said longitudinal axis of said active region.

9. The catheter of claim 8, wherein said distal portion is curved.

10. The catheter of claim 8, wherein said distal portion is straight.

11. The catheter of claim 8, wherein said cross-sectional configuration of said distal portion defines a flattened outer peripheral wall that is adapted to be oriented against the tissue.

12. The catheter of claim 11, wherein said cross-sectional configuration of said distal portion is a polygon.

13. The catheter of claim 12, wherein said cross-sectional configuration of said distal portion is triangular.

14. The catheter of claim 12 or 13, wherein said active region includes a plurality of portholes through said flattened outer peripheral wall.

15. The catheter of claim 11, wherein said cross-sectional configuration is a D-shaped cross-sectional configuration.

16. The catheter of claim 15, wherein said D-shaped cross-sectional configuration has an aspect ratio of at least 1.5:1.

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17. The catheter of claim 15, wherein said D-shaped cross-sectional configuration has an aspect ratio of 2.2:1.

18. The catheter of claim 15, wherein said active region includes a plurality of portholes through said flattened outer peripheral wall.